

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Completed by: Brian J. Smith

GENERAL INFORMATION:

Name:	Gallatin Steel Company
Address:	US Highway 42, Warsaw, Kentucky
Date application received:	5/09/2007
SIC/Source description:	3312
Source ID #:	21-077-00018
Source A.I. #:	1449
Activity #:	APE20070002
Permit number:	V-03-031 R2

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input checked="" type="checkbox"/> Permit modification	<input type="checkbox"/> Conditional major
<input type="checkbox"/> Administrative	<input checked="" type="checkbox"/> Title V
<input type="checkbox"/> Minor	<input type="checkbox"/> Synthetic minor
<input checked="" type="checkbox"/> Significant	<input type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input checked="" type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input checked="" type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input checked="" type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☐ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☒ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

The increase in annual emissions due to the modification are 211.4 tpy of SO₂ ; 84.3tpy of TSP; 84.3 tpy of PM₁₀; 220.0 tpy of NO_x; 862.8 tpy of CO; 56.1 tpy of VOC, and 0.35 tpy of Pb. Since the mill is located in an attainment area for all criteria pollutants, pollutants that are emitted in excess of the PSD significant emission rate are subject to PSD review. Due to this modification, all criteria pollutants except lead will be emitted in excess of the PSD significant emission rate. The requirements include demonstration of Best Available Control Technology (BACT) and an ambient air quality impact analysis to address compliance with the PSD increments and NAAQS.

COMPARISON OF PROJECT EMISSIONS CAUSED BY THE MODIFICATION TO PSD THRESHOLDS:

Pollutant	Potential (tpy)	PSD Significant Emission Rate (tpy)	PSD Triggered?
PM/PM ₁₀	84.3	15	Yes
SO ₂	211.4	40	Yes
NO _x	220.0	40	Yes
CO	862.8	100	Yes
VOC	56.1	40	Yes
Pb	0.35	0.6	No
Source wide HAPs	Trace		No

SOURCE DESCRIPTION:

The Gallatin Steel facility in Ghent, Kentucky recycles scrap steel to make new hot-rolled steel coils using a continuous Compact Strip Production or CSP process. Gallatin is ISO/TS 16949 certified. The manufacturing facility consists of a twin-shell DC electric arc furnace, a ladle metallurgy facility, a thin-slab continuous caster and a six-stand hot finishing mill. Gallatin Steel, located on the Ohio River in Ghent, KY, produces hot rolled sheet steel coil, hot rolled P&O coil and hot rolled slit coil in low carbon (C1010), medium carbon (C1015-C1035), high carbon (C1050-C1055) and HSLA chemistries (up to 80 ksi min yield) from gauges of 0.055" to .625" thick and 42" to 64" wide.

Gallatin Steel Company, an existing PSD/Title V major source, submitted a permit modification application to its existing V-03-031 R1 permit on May 9, 2007. The plant is a PSD/Title V source because criteria air pollutants potential emissions exceed the major source thresholds. Gallatin Steel Company is proposing to modify and increase its production rates to a maximum of 275 tons per year with this application. The facility proposes to add a Ladle Metallurgy Furnace (LMF) to replace the existing LMF. The new unit will be relocated to optimize the flow of product through the melt shop. Also, the capacity of the two EAF transformers will be upgraded to 90 Mega-Volt-Ampere (MVA) from the existing 75 MVA transformers. This application is considered a significant revision that is subject to the provisions of PSD regulation 401 KAR 51:017.

EMISSION AND OPERATING CAPS DESCRIPTION:

Below is a summary of the BACT limits and control equipment.

Pollutant	Control Description	BACT Limit
NO _x	Combustion control	0.51 lb/ton
CO	Use of existing DEC ducts	2.0 lb/ton
VOC	Scrap management program	0.13 lb/ton
SO ₂	Scrap management program	0.2 and 0.49 lb/ton
PM(PM ₁₀)	Baghouse	0.0018 gr/dscf

OPERATIONAL FLEXIBILITY:

None